

What is claimed is:

1. A sampling syringe unit for sampling blood or body fluid, comprising:

5 a syringe base;

a diaphragm attached to one surface of said syringe base, for defining a chamber in cooperation with said syringe base;

10 a hollow tubular needle protruding substantially perpendicularly from a surface of said syringe base opposite to the surface on which said diaphragm is arranged, and communicating with the chamber; and

15 a protective member having an aperture for passing said needle therethrough, said protective member facing the surface of said syringe base from which said needle protrudes and movable toward and away from said syringe base, wherein in a normal state, said protective member is located more outward than a tip of said needle.

20 2. The sampling syringe unit according to claim 1, wherein said sampling syringe unit is a disposable type removably attached to a sampling device.

25 3. The sampling syringe unit according to claim 1, wherein said needle protrudes from a central portion of said syringe base and has an outer diameter of 0.1 mm or less.

30 4. The sampling syringe unit according to claim 1, wherein said syringe base has electrodes arranged in a communication passage connecting the chamber and said needle for examining a substance sampled through said needle.

5. The sampling syringe unit according to claim 4,
wherein said electrodes are arranged in a portion of the
communication passage extending parallel with said
5 diaphragm.

6. A sampling device for sampling blood or body fluid,
comprising:

a housing unit to which the sampling syringe unit
10 according to claim 1 is removably attached in such a manner
that the surface of the syringe base on which the needle is
arranged faces outward;

a first actuator arranged in said housing unit, for
displacing the syringe base of the sampling syringe unit
15 attached to said housing unit in a direction toward the
surface of the syringe base on which the needle is
arranged; and

a second actuator arranged in said housing unit and
driven in association with said first actuator, for
20 displacing the diaphragm in a direction toward the surface
of the syringe base on which the needle is arranged, and
then releasing the displacing force to restore the
diaphragm and thereby cause a suction pressure to be
produced in the chamber.

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7. A sampling device for sampling blood or body fluid,
comprising:

a housing unit to which the sampling syringe unit
according to claim 1 is removably attached in such a manner
30 that the surface of the syringe base on which the needle is
arranged faces outward;

an actuator arranged in said housing unit, for
displacing the syringe base of the sampling syringe unit

attached to said housing unit in a direction toward the surface of the syringe base on which the needle is arranged; and

5 a deformation control member for deforming the diaphragm as the syringe base is displaced, to cause a suction pressure to be produced in the chamber, and then maintaining a deformed state of the diaphragm.

8. The sampling device according to claim 6 or 7,
10 further comprising a controller incorporated in said housing unit for controlling operation timing of said actuators/actuator.

9. A method of sampling blood or body fluid,
15 comprising:

attaching the sampling devices according to claim 8 to a subject; and

sequentially driving the sampling devices to sample blood or body fluid from the subject at different times.